



ONE DOLLAR PER YEAR.

Club Rates.—Two copies, \$1.80; 3 copies, \$2.50; 4 copies, \$3.20; 5 copies, \$3.75. Mailed to any addresses.

THOMAS G. NEWMAN, EDITOR.
GEO. W. YORK, ASSISTANT EDITOR.

Vol. XXIX. May 26, 1892. No. 22.

Editorial Buzzings.

A Bird sang sweet and strong,
In the top of the highest tree;
He said: "I pour out my heart in song
For the Summer that soon shall be."

But deep in the shady wood,
Another bird sang: "I pour
My heart on the solemn solitude,
For the Springs that return no more."

A Good Remedy for bee-stings is to cut an onion in two and apply the cut surface to the wound.

The Weather of late has been very wet. Continual showers have been "the order of the day," and also the night. The low land nearly all over the country is under water. It seems now almost an impossibility for there to be any drouth this year—the ground is so heavily charged with moisture, and the bloom must be abundant, even if it is long delayed.

A Fire, on May 18, destroyed the printing office and bindery where the BEE JOURNAL had been printed and bound during the past 15 years. Our last issue came out on time, however, through the kindness of the Woman's Christian Temperance Union. The next day after the fire, their largest press was placed at our disposal, and hence we were able to visit our readers at the usual hour, just as though nothing had happened. The loss is fully covered by insurance, as all such losses should be.

It is Somewhat Difficult to say just when or where to begin to prepare honey for market—perhaps the best time would be before we have any. To be able to have the choicest comb-honey, it must be built in nice, white sections. Another article of importance is nice, thin foundation. With this fastened in the sections, they have a neat appearance.—*Exchange.*

Dr. A. B. Mason was in Chicago last week, and in company with the editor of the AMERICAN BEE JOURNAL, held a conference with Mr. Buchanan, Chief of the Agricultural Department of the World's Fair, with reference to the Apian Exhibit. Our readers may expect something definite about the arrangements, in our next issue.

Chilian Honey is dark in color, and inferior in quality. A correspondent writes that he has seen in one day 500 barrels of honey shipped from one Chilian port. He says that most of the honey produced in that South American country comes from the Desert of Atacama, which is a wonderful honey-producing locality.

Not Securing the hives, sections, foundation and other supplies in season is a mistake made year after year by many bee-keepers.

The Wiley Lie has assumed a new phase. This time it comes by way of the printing office of "the United States Department of Agriculture, Division of Chemistry, Bulletin No. 13."

It is a pamphlet of 250 pages, on "Foods and Food Adulterants," and purports to be the reports of investigations made under direction of H. W. Wiley, Chief Chemist, by assistants in different parts of the country.

The whole thing is an ingenious method invented (apparently at least) to injure the pursuit of bee-culture, and pay off the AMERICAN BEE JOURNAL for the righteous war waged upon the Professor, which finally wrung from him the apologetic letter to counteract the influence of the so-called "scientific pleasantry," eight years after he had perpetrated that *huge joke* upon the world!

The pamphlet is full of blunders, misstatements, misrepresentations, and ill-concealed spite.

He persists in calling comb-foundation "artificial comb," and gives a list of "manufacturers of comb," in which he enumerates: T. G. Newman, Chicago, Ills., though that person never manufactured an ounce of "comb" in his life, nor even comb-foundation, which, of course, the wily Professor would have us believe that he was writing about! But if he meant "comb-foundation," why does he omit any mention of such large manufacturers as A. I. Root, J. Van Deusen & Sons, and many others? Simply because he tries to mislead and vent his spite upon those who have dared to defend the pursuit against his "scientific pleasantries" and his oft-repeated misrepresentations!

On page 740 of the pamphlet, the wily Professor remarks as follows:

Perhaps there is no other article of food which has been so generally adulterated in the United States, during the last 20 years, as honey. The ease with which sophistication could be practiced, the cheapness of the material used, and the high price of the genuine product have presented temptations which the

manufacturer, producer, and dealer have not been able to withstand.

As long as honey was sold wholly in the comb, the difficulties in the way of successful sophistication were so great as to practically preclude its practice. The popular impression to the effect that comb-honey is adulterated was probably produced rather by ingenious attempts to manufacture the spurious article than by the commercial success of the enterprise. Artificial comb-honey has been regarded as a possible article of commerce by many scientific men.

The last sentence is worthy of the man who invented the story about "artificial comb being made by machinery, filled with glucose, and capped by a hot iron!"

But hold! He admitted that it was a falsehood, and suffered a "retraction" to be published; and he must now invent a new way to injure honey-producers. So the book is published, and allowed to be copied into thousands of newspapers, with this re-vamped "Wiley lie"—that "artificial comb" IS "a possible article of commerce!" Then, a week afterwards, comes a little slip of paper by mail, containing five lines of corrections, one of which is to insert "not" after "artificial comb-honey has," etc. That slow correction, he well knows, will NEVER overtake the false assertion in the official document itself!!

The Professor then takes another tack. He says:

Although not a matter of national legislation the standard of pure honey is not hard to fix. By universal consent it may be stated that a pure honey is the nectar of flowers and other saccharine exudations of plants, gathered by bees, and stored in cells built at least in part by the bees themselves.

Honey made by feeding bees glucose, sugar, invert-sugar, or other saccharine substances, is not pure honey. Nor is that pure honey which is made by adding to an empty or partially filled honey-comb glucose, or any other saccharine substance.

Just as we have before intimated; the unfortunate blunder of publishing the Hasty Sugar Honey article, last Winter, has been seized upon to give color to

the Professor's charge, and make his blows the more severe. Of course, we well know that "sugar is not honey," and have often so stated it in the BEE JOURNAL. It was a sad blunder to have unthinkingly given into the hands of our enemies the hammer with which to strike this terrible blow!

One of our valued exchanges copied the above extracts, and then added:

Fifty samples of honey collected in Ohio, for which 20 cents per pound—the price of pure honey—was paid, and 20 were adulterated with glucose costing 3 cents per pound. Two samples had been adulterated with cane sugar or syrup.

The labels on the samples, most of which are transcribed, are very enticing, "Golden-Rod Honey," "XX White Clover Honey," "Pure Old Virginia Honey," "Strictly Pure Extracted Honey," figure conspicuously.

"Pure Machine Extracted-Honey," labeled from the apiary of C. F. Muth, also "Muth's California Honey," is classed by the chemist as almost pure glucose.

No, sir. *It is false!* Brother Muth never mixed an ounce of glucose, or any other adulterant with honey! *Never!* Every one acquainted with the man knows that it is beneath him to do so! Honesty is stamped upon his every action—every word—every thought!

Brother Muth's crime is that, like an honest man, he has fought adulteration, and therefore an attempt must be made to destroy his influence—he must be branded as an adulterator!

The same thing has been done about the editor of the AMERICAN BEE JOURNAL. Men, when cornered in their stories about manufactured comb-honey, have several times asserted that they had seen its editor actually make combs by machinery, fill them with glucose, and cap the cells with hot irons.

These falsehoods have been repeated over and over again, until some people actually try to make themselves believe them, even though there is not a word of truth in them. But why multiply words on this subject?

We close by saying that the purity of honey cannot be absolutely determined by analysis. The difference in atmosphere and soil makes it impossible to invariably decide whether it is adulterated or not. This very thing has given the wily Professor a chance to stab us in the dark, but he brings down upon himself and his associates the execration of the apiarists of the world.

This report has cost the United States Government thousands of dollars, and it is not only utterly worthless, but it is a waste of money, and is a disgrace to the Nation as well!

Bees and Fruit.—The following item shows the value of bees to fruit-growers:

"A fruit-grower in England established an extensive greenhouse, and stocked it with choice native and exotic fruit trees. He expected in due time that he would have an abundance of fruit. Seasons passed, but no fruit. There were plenty of blossoms on each tree, but no fruit. A great many different plans were employed to bring the trees to bearing, but they were all unsuccessful. Finally a friend suggested to him to place a colony of bees in his greenhouse to fertilize the blossoms. The next season there was an abundance of fruit. The bees had distributed the pollen from flower to flower, and thus fertilized the blossoms. In the large greenhouses at Arlington, N. J., where they raise early cucumbers, they have bees to fertilize the blossoms.

Gloves used about the apiary, becoming dirty or covered with propolis, can be easily cleaned by soaking a day or two in strong lye made from potash or wood ashes, or by soaking in water saturated with quick-lime. The propolis comes off without difficulty after such a soaking.

An Apiary in Windsor, Colo., last season produced four tons of alfalfa honey of excellent quality. Alfalfa is the best honey-producer in that region of country.

Queries and Replies.

Mating of Italian Queens.

QUERY 820.—Out of a good lot of young Italian queens, but two mated with black drones, and that when all the bees in my neighborhood are blacks (about 50 colonies in from $\frac{1}{4}$ to one mile from my yard) except my bees, which are Italians except one colony. 1. Why did so large a per cent. of my queens mate with the drones in my own yard? 2. May I expect the same result next year?—North Carolina.

Ask something easier.—C. C. MILLER.

I do not know anything about this.—P. H. ELWOOD.

1. I think this is a mistake. 2. No.—G. M. DOOLITTLE.

1. I do not know. 2. It is very doubtful.—E. FRANCE.

1. That is just about the proportion I should expect to find purely mated. 2. Yes.—C. H. DIBBERN.

1. There was a preponderance of drones from your yard in the air, hence the result. 2. I don't know.—J. M. HAMBAUGH.

Your young queens may not be as purely mated as you suppose. You can expect almost anything with bees.—H. D. CUTTING.

1. Because you had drones in abundance at home. 2. If circumstances are the same you may expect about the same results.—MRS. JENNIE ATCHLEY.

I judge you had more numerous and more vigorous drones in your apiary. I think it an unusual experience, and shall be surprised if it is repeated.—A. J. COOK.

In all probability, at the time your young Italian queens were ready to mate, there was a paucity of black drones, which might not be the case at another season.—J. P. H. BROWN.

How many is "a good lot?" I think your experience is unusual. There might be good reasons for it, but no one could give them without knowing all the circumstances.—JAMES A. GREEN.

1. For a guess, I will say because the Italian drones were more plentiful than blacks, at the time of mating. 2. Possibly you may, and then again just the reverse may happen.—J. E. POSE.

1. I cannot account for such an unusual mating, unless your drones and queens were earlier developing than those of all your neighbors. 2. No; I would not expect such results again.—JAMES HEDDON.

1. If you have one colony of black bees in your yard, the probabilities are that your two mismated queens met drones from this colony, and your queens, no doubt, were all mated with drones from your own yard. 2. Practically the same.—MRS. J. N. HEATER.

1. I merely suggest that this favorable result might have been caused by windy weather that prevented the queens flying far from home. 2. If the above theory be correct, you can hardly hope for equal success two years in succession.—EUGENE SECOR.

There is little danger of bees mixing at a distance of one-half mile, if there are plenty of drones in your own yard, and none at all at one mile. If you wish to rear Italian queens, you had better get rid of that black colony.—MRS. L. HARRISON.

1. "I don't know." 2. Yes, if you want to. It won't be "treading on any one's toes" to expect it, and it may help to keep you out of mischief; but with my hopeful disposition, I would not spend much time expecting such a result, if I had anything else to do.—A. B. MASON.

1. I guess that more than two of your Italian queens mated with black drones. Bees resemble the queen much more than the drone, and an expert is liable to be deceived as to the purity of Italian bees. 2. If you breed from the young queens, I think you will find a stronger infusion of "black blood."—M. MAHIN.

Probably because at the time your young queens mated, the weather may not have been favorable for the black drones in your vicinity to make long flights of one-half mile. Cloudy days and windy are not favorable for drones to fly far from their hives. Next year may bring the opposite result.—G. L. TINKER.

How do you know that only two mated with black drones? You cannot tell by the color of the workers. The first two Italian queens I ever saw were two I

ordered sent to me, and there were no others in this section. Before there was time for drones to be hatched from them, I reared a lot of queens from them, about half of which produced fine yellow three-banded, uniformly-marked workers, and one queen produced four-banded bees.—R. L. TAYLOR.

Your experience does not surprise me. Young queens do not prow! all over the country in search of a mate when plenty of drones are to be met with in the immediate vicinity of their home. When drones are few and far between, I have seen evidence of longer flight on the part of queens. 1. Because you had plenty of drones at home, and the queens were not mated in the immediate vicinity of their homes. 2. You cannot expect the same results in a matter of this kind.—G. W. DEMARÉE.

1. It is all chance work to a certain extent, and controlled by the circumstances surrounding the apiary. The drones at home were numerous, full of vigor, and on the alert, letting no young and innocent queen escape their notice. High winds may have interfered with the flying of the royal ladies, or they may have developed earlier than the black drones. 2. As to the results another year, do not expect or anticipate anything—then you will not be disappointed.—THE EDITOR.

In His Annual Report of the Colorado experiment station, Prof. C. Max Brose writes as follows: "The successful wintering of bees is of the greatest importance to the bee-keeper. On it depends his success or failure for the following Summer; and in order that every colony may be strong in the Spring, eager to start the Summer campaign of gathering stores for themselves and their owner, the following points are of greatest importance to the apiarist: The colonies should go into winter quarters with plenty of young bees—at least four frames should be covered with them—and 35 pounds of sealed honey. They should be kept at an even temperature—45° to 50°—and never be unnecessarily disturbed. The hive should be in such a condition as to absorb all the moisture generated by the bees during the Winter."

Bee-Keepers' Associations.

The following is a corrected list of the associations for bee-keepers in the United States, which was published in the AMERICAN BEE JOURNAL for June 25, 1891. It may yet be incomplete, and if any of our readers can inform us as to further needed corrections, we shall appreciate it, as we desire to have the list as nearly right as possible.

North American Bee-Keepers' Association, Eugene Secor, President. W. Z. Hutchinson, Secretary, Flint, Mich.

Agency Bee-Keepers' Association, T. S. Smith, Secretary, Agency, Mo.

Alabama State Bee-Keepers' Association, J. M. Jenkins, Secretary, Wetumpka, Ala.

Bee and Poultry-Keepers' Association, Ora Knowlton, Sec'y, New Brunswick, Ind.

Boone and Hendricks Counties Bee-Keepers' Association, John Ridgway, Secretary, Brownsburg, Ind.

Brant Bee-Keepers' Association, D. Anguish, Secretary, Brantford, Ont.

Brookfield Bee-Keepers' Association, Jos. G. Banning, Secretary, Brookfield, Mo.

Bruce Bee-Keepers' Association, A. Tolton, Secretary, —, Ontario.

California State Bee-Keepers' Association, John H. Martin, Secretary, Riverside, Calif.

Capital Bee-Keepers' Association, C. E. Yocom, Secretary, Sherman, Ills.

Carolina Bee-Keepers' Association, N. P. Lyles, Secretary, Derita, N. C.

Cedar Valley Bee-Keepers' Association, J. J. Owens, Secretary, Waterloo, Iowa.

Central Iowa Bee-Keepers' Association, A. J. Adkinson, Secretary, Winterset, Iowa.

Central Michigan Bee-Keepers' Association, W. A. Barnes, Secretary, Lansing, Mich.

Colorado State Bee-Keepers' Association, H. Knight, Secretary, Littleton, Colo.

Cortland Union Bee-Keepers' Association, C. W. Wilkins, Secretary, Homer, N. Y.

Darke County Union Bee-Keepers' Association, J. A. Roe, Secretary, Union City, Ind.

Des Moines County Bee-Keepers' Association, John Nau, Secretary, Middletown, Iowa.

Eastern Indiana Bee-Keepers' Association, M. G. Reynolds, Secretary, Williamsburg, Ind.

Eastern Iowa Bee-Keepers' Association, Frank Coverdale, Secretary, Welton, Iowa.

Eastern Iowa and Western Illinois Bee-Keepers' Association, H. S. Dibbern, Secretary, Milan, Ills.

Eastern New York Bee-Keepers' Association, W. S. Ward, Secretary, Fuller's Station, N. Y.

Erie County Bee-Keepers' Association, R. Meatyard, Secretary, Protection, N. Y.

Eureka Springs Bee-Keepers' Association, Dr. S. S. Purcell, Secretary, Eureka Springs, Ark.

Fremont Progressive Bee-Keepers' Association, G. E. Hilton, Sec'y, Fremont, Mich.

Grand Traverse, Mich., Bee-Keepers' Association, Mrs. Geo. E. Steele, Secretary, Grand Traverse, Mich.

Haldimand Bee-Keepers' Association, E. C. Campbell, Secretary, Cayuga, Ont.

Hamilton County Bee-Keepers' Association, Geo. C. Thompson, Secretary, Southport, Ind.

Hancock County Bee-Keepers' Association, S. H. Bolton, Secretary, Stanley, O.

Hardin County Bee-Keepers' Association, J. W. Buchanan, Secretary, Eldorado, Iowa.

Hill County Bee-Keepers' Association, H. A. Goodrich, Secretary, Massey, Tex.

Huron, Tuscola, and Sanilac Counties Bee-Keepers' Association, John G. Kundinger, Secretary, Kilmanagh, Mich.

Illinois State Bee-Keepers' Association, Jas. A. Stone, Secretary, Bradfordton, Ills.

Indiana State Bee-Keepers' Association, J. P. Wilson, Secretary, Toll Gate, Ind.

Ionia Bee-Keepers' Association, Harmon Smith, Secretary, Ionia, Mich.

Iowa State Bee-Keepers' Association, Thos. Chantry, Secretary, Casey, Iowa.

Johnson County Bee-Keepers' Association, L. R. Jackson, Sec'y, Urneyville, Ind.

Kansas State Bee-Keepers' Association, J. B. Kline, Secretary, Topeka, Kans.

Kentucky State Bee-Keepers' Association, T. Connley, Secretary, Napoleon, Ky.

Keystone Bee-Keepers' Association, A. A. Davis, Secretary, Clark's Green, Pa.

Linwood Bee-Keepers' Association, B. J. Thompson, Secretary, Waverly, Wis.

Madison County, N. Y., Bee-Keepers' Association, W. V. Bosworth, Jr., Secretary, Clockville, N. Y.

Mahoning Valley Bee-Keepers' Association, E. W. Turner, Sec'y, Newton Falls, O.

Manitoba Bee-Keepers' Association, J. Hammond, Secretary, Winnipeg, Manitoba.

Maine Bee-Keepers' Association, J. F. Fuller, Secretary, Oxford, Me.

Maine State Bee-Keepers' Association, Wm. Hoyt, Secretary, Ripley, Me.

Maricopa County Bee-Keepers' Association, J. A. R. Irvine, Secretary, Phoenix, Arizona.

Marion County Bee-Keepers' Association, Dr. H. J. Scoles, President, Knoxville, Iowa.

Marshall County Bee-Keepers' Association, J. W. Sanders, Sec'y, LeGrand, Iowa.

Maryland, Virginia and West Virginia Bee-Keepers' Association, D. A. Pike, President, Smithsburg, Md.

Michigan State Bee-Keepers' Association, G. E. Hilton, Secretary, Fremont, Mich.

Minnesota State Bee-Keepers' Association, C. Theilmann, Secretary, Theilmanton, Minn.

Missouri State Bee-Keepers' Association, J. W. Rouse, Secretary, Mexico, Mo.

Nashau Bee-Keepers' Association, H. L. Rouse, Secretary, Ionia, Iowa.

Nebraska State Bee-Keepers' Association, J. N. Heater, Secretary, Columbus, Nebr.

Nemaha County Bee-Keepers' Association, R. Corgell, Secretary, Brock, Nebr.

Newaygo County Farmers and Bee-Keepers' Association, Geo. E. Hilton, Secretary, Fremont, Mich.

New Jersey and Eastern Bee-Keepers' Association, W. B. Treadwell, Secretary, 16 Thomas St., New York City.

New York State Bee-Keepers' Association, Geo. H. Knickerbocker, Secretary, Pine Plains, N. Y.

North Carolina State Bee-Keepers' Association, A. L. Beach, Sec'y, Pineville, N. C.

Northeastern Bee-Keepers' Association, Geo. W. House, Secretary, Syracuse, N. Y.

Northeastern Kansas Bee-Keepers' Association, L. C. Clark, Sec'y, Hiawatha, Kans.

Northeastern Kentucky Bee-Keepers' Association, Alex. W. Stith, Secretary, Portland, Ky.

Northeastern Michigan Bee-Keepers' Association, W. Z. Hutchinson, Secretary, Flint, Mich.

Northeastern Ohio, Northwestern Pennsylvania and Western New York Bee-Keepers' Association, Geo. Spittler, Secretary, Mosiertown, Pa.

Northern Illinois Bee-Keepers' Association, Chas. Winn, Secretary, P. O. Box 1854, Rockford, Ills.

Northern Indiana and Southern Michigan Bee-Keepers' Association, F. L. Putt, Secretary, Goshen, Ind.

Northern Michigan Bee-Keepers' Association, F. A. Palmer, Secretary, McBride, Mich.

Northern Ohio Bee-Keepers' Association, H. R. Boardman, Secretary, East Townsend, Ohio.

Northwestern Bee-Keepers' Society, at Chicago, W. Z. Hutchinson, Secretary, Flint, Mich.

Northwestern Indiana Bee-Keepers' Association, A. Fahnestock, Secretary, La Porte, Ind.

Ohio State Bee-Keepers' Association, S. R. Morris, Secretary, Bloomingsburgh, O.

Oneida and Madison County, N. Y., Bee-Keepers' Association, C. W. Perry, Secretary, New London, N. Y.

Ontario Bee-Keepers' Association, W. Couse, Secretary, Streetsville, Ont.

Ontario County, N. Y., Bee-Keepers' Association, Miss R. E. Taylor, Secretary, Bellona, N. Y.

Pan-Handle Bee-Keepers' Association, W. L. Kinsey, Secretary, Blaine, O.

Patsalaga Bee-Keepers' Society, M. G. Rushton, Secretary, Raif Branch, Ala.

Philadelphia Bee-Keepers' Association, F. Hahman, Jr., Secretary, Philadelphia, Pa.

Portage County Bee-Keepers' Association, L. G. Reed, Secretary, Kent, O.

Progressive Bee-Keepers' Association, Miss Dena Bennett, Secretary, Bedford, O.

Progressive Bee-Keepers' Association, J. G. Norton, Macomb, Ills.

Province of Quebec Bee-Keepers' Association, S. B. La Montagne, Secretary, Montreal, Can.

Rhode Island Bee-Keepers' Society, G. A. Stockwell, Secretary, Providence, R. I.

Rock River Bee-Keepers' Association, J. M. Burch, Secretary, Morrison, Ills.

Saint Joseph Inter-State Bee-Keepers' Association, E. T. Abbott, Secretary, St. Joseph, Mo.

Seneca County Bee-Keepers' Association, I. Wilson, Secretary, Ovid, N. Y.

Shenandoah Valley Bee-Keepers' Association, Joseph E. Shaver, Secretary, Friedens, Va.

Sheboygan County Bee-Keepers' Association, Mattie B. Thomas, Secretary, Sheboygan Falls, Wis.

Southeastern Michigan Bee-Keepers' Association, A. M. Gander, Secretary, Adrian, Mich.

Southern California Bee-Keepers' Association, G. W. Brodbeck, Secretary, Los Angeles, Calif.

Southern Illinois Bee-Keepers' Association, F. H. Kennedy, Secretary, Du Quoin, Ills.

Southern Indiana Bee-Keepers' Association, C. Firth, Secretary, Madison, Ind.

Southern Wisconsin Bee-Keepers' Association, J. T. Pomeroy, Secretary, Edgerton, Wis.

Southwestern Iowa Bee-Keepers' Association, E. W. Pitzer, Glenwood, Iowa.

Southwestern Wisconsin Bee-Keepers' Association, Benj. Rice, Secretary, Boscobel, Wis.

Stark County Bee-Keepers' Association, Mark Thomson, Secretary, Canton, O.

Susquehanna County (Pa.) Bee-Keepers' Association, H. M. Seeley, Secretary, Harford, Pa.

Texas State Bee-Keepers' Association, A. H. Jones, Secretary, Golden, Iowa.

Tri-State Bee-Keepers' Society, Dr. A. B. Mason, Secretary, Anburndale, O.

Tuscarawas County Bee-Keepers' Association, Geo. F. Williams, Secretary, New Philadelphia, O.

Turkey Hill, Bee-Keepers' Association, A. Fehr, Secretary, Belleville, Ills.

Union Bee-Keepers' Association, Daniel Shank, Secretary, Clayton, Ills.

Union Bee-Keepers' Association, Mrs. J. E. Pryor, President, Dexter, Iowa.

Union Bee-Keepers' Society, G. W. Demaree, Secretary, Christiansburg, Ky.

Utah Bee-Keepers' Association, J. C. Swanner, Secretary, Salt Lake City, Utah.

Ventura County Bee-Keepers' Association, S. C. Gridley, Secretary, Nordhoff, Cal.

Vermont Bee-Keepers' Association, Miss Marcia Douglas, Secretary, Shoreham, Vt.

Wabash County Bee-Keepers' Association, Henry Cripe, Secretary, North Manchester, Ind.

Wabash Valley Bee-Keepers' Association, Frank Vawter, Secretary, Vincennes, Ind.

Welland County Bee-Keepers' Association, J. F. Dunn, Secretary, Ridgeway, Ont.

Western Bee-Keepers' Association, P. Otto, Secretary, cor. Park and 25th Sts., Kansas City, Mo.

Western Connecticut Bee-Keepers' Association, Mrs. W. E. Riley, Secretary, Waterbury, Conn.

Western Maine Bee-Keepers' Association, F. D. Wellcome, Secretary, Poland, Me.

Whiteside County (Ills.) Bee-Keepers' Association, J. M. Burch, Secretary, Morrison, Ills.

Willamette Valley Bee-Keepers' Association, E. J. Hadley, Secretary, La Fayette, Oregon.

Wisconsin Lake Shore Center Bee-Keepers' Association, F. Zastrow, Secretary, Kiel, Wis.

Wisconsin State Bee-Keepers' Association, Dr. J. W. Vance, Secretary, Madison, Wis.

York and Cumberland Bee-Keepers' Association, C. W. Costellow, Secretary, Waterboro, Me.

York County Bee-Keepers' Association, L. D. Stilson, Secretary, York, Nebr.

Honey in the Heart of a Tree.

A remarkable discovery was recently made at the Cathays yard of the Taff Vale Railway Company. A large elm tree, grown in Gloucestershire, was being cut up into timber, when, right in the very heart, a cavity measuring 8 feet by 7½ inches in diameter was discovered almost completely filled with the comb of the honey-bee, together with a squirrel's skull.

No means of access to the hollow was discoverable, neither was decay anywhere apparent, and around the cavity itself no less than 50 "rings," each ring denoting a year's growth, were counted, the outer bark being, too, without a flaw.

The hollow was of uniform size throughout, and presented the appearance of having been bored with an auger, and, great though its dimensions were, it was practically filled with the comb, proving that the bees must have been in possession for several years.

Empty combs of the queen-bee also showed that they had swarmed. How the bees got there can only be guessed, but it is surmised that a squirrel once occupied a decayed hole in the tree, cleared away the decay, occupied the cavity as its own, and there died.

Then the bees entered into possession and filled the hole with comb, when, by some means, the entrance, which must have been small, became stopped, the large quantity of grub and fly being taken as demonstrative that the nest was not voluntarily deserted.

Then for 50 years the growth of the timber went on. The entrance being absolutely obliterated, and the hole being hermetically sealed, the comb was preserved from decay for half a century, to be found at last in the way described. The find is of the greatest interest to naturalists.—*Green's Fruit Grower*.

Owing to his success last year, C. H. Toll, near Denver, Colo., will increase his apiary this year to 500 colonies.

Topics of Interest.

How to Use Empty Comb.

G. M. DOOLITTLE.

There is a right and wrong way to do almost everything, and the reason why some men succeed well at a business while others fail, is because the successful ones take hold of the matter in the right way.

Some bee-keepers do not seem to succeed in using empty combs, when hiving new swarms on them, and seem to think that those who recommend such procedure are nearly, if not quite, insane. A correspondent writes:

"I have abandoned hiving swarms upon empty combs, as the bees will fill the combs with honey in a few days, filling them so full that the queens find but little room to lay; then they loaf a long time before commencing work in the sections, and when they do finally begin, it is in a slow, easy sort of way."

As I have used empty combs to hive prime swarms upon many times, and that with good results, it is evident that there must be a right and a wrong way to use empty combs, when working for comb-honey with prime swarms.

When a prime swarm leaves its old home, the queen going with such swarm is not in a condition for rapid egg-laying until the swarm has been hived long enough for the bees to get under full headway building comb; as this is one of the laws which governed them before they were domesticated by man, hence, if a full hive of empty comb is given such a swarm, the first thing the bees will do is to fill it with honey, no matter how few or how many sections are given, for the bees have room in this brood-chamber for all of their immediate wants.

If we extract from these combs we do not materially help the matter, except to give a little more room for the queen; for, after extracting, the first instinct of the bees is to fill those empty cells again, instead of leaving an empty lot of comb in the brood-chamber, to go to work in the sections. Thus we secure only a little extracted-honey for our trouble, while two such extractings will effectually exclude all honey from the sections; and not to extract, is nearly as bad, for after once filling the combs in the brood-chamber, with sealed honey instead of brood, the bees are always

loth to enter the sections; for the reason I first gave, which is, that they feel that all their wants are well supplied.

Now, the trouble with my correspondent was in giving the bees too many combs. By so doing, the bees found room to occupy all their forces in the brood-chamber, while if only one-half or one-third as many had been given, the bees, not being able to cluster and work on these combs, would have immediately gone into the sections, and gone to work there. Having thus at once started in the sections, the little honey stored in the few combs below will be carried to the sections as fast as the queen needs room for egg-laying, and the result with me always is, that at the end of 15 days from the time of hiving, the sections are well filled with honey, and the combs below are a solid mass of brood, except a little pollen and honey in the extreme upper corners of the frames.

The object should be in all cases, whether we use combs, frames of foundation, or empty frames, to get the bees to work in the sections immediately upon being hived. I use six Gallup frames of comb (equal to five Langstroth frames) for the very largest swarms, while others have but four or five, according to the size of the swarm to be hived, and in this way I always secure good results.

One of the secrets of securing plenty of comb-honey, is to have the sections just as near the brood as possible; and any plan which allows of one or more inches of sealed honey between the brood and the sections, at the beginning of the honey harvest, is certainly defective.

In hiving swarms on empty frames, with the sections filled with foundation, as our correspondent says he now does, places his bees in the right position to comply with the above secret, while with the hive full of empty comb the condition was exactly the reverse.

Another thing: While it is almost necessary to furnish a full sheet of comb foundation for every section when a swarm is so hived, such foundation is often as good as thrown away while working with combs as I have outlined, for I have repeatedly had sections filled and completed which contained only a small starter of natural comb, as quickly as those filled with foundation standing by their side, while an examination of these latter sections showed that said foundation had not been touched, except as the bees added their wax to it. Now, why was this?

The reason is very simple. All new swarms of bees have been preparing for a week previous to the time of issuing, for the construction of combs in their new home, and for this reason we often see little bits of wax, from the size of a pinhead, attached in many places to the limb of the tree they have clustered on, if they stay clustered for five minutes or more. This wax being secreted, must be used somewhere or wasted. When hiving in empty hives it is used in building comb down in the brood-chamber, while the bees are drawing out the foundation in the sections; while, when using combs below as I have given, it is used in filling the sections with beautiful combs, as they have no need for it below.

From the above it will be seen that the reason my correspondent and myself do not agree regarding the use of empty combs is, that we do not manage alike, and I suspect that the different methods of management is what causes the "bee-doctors" to so often disagree.

Berodino, N. Y.

Wintering Problem—Absorbents.

J. P. SMITH.

The middle of last September found me with 42 colonies of bees. Not caring to winter more than about 25 colonies, the question arose, What shall I do with the balance? I decided to examine them and unite where practical, which I did until I reduced them to 25 colonies, filling the hives literally full of bees. After smoking them quite thoroughly, they united readily without fighting.

In uniting 2 colonies, I would find and destroy the poorest queen. I managed this so that all the queens but two were hatched in 1891. I made a careful estimate of the honey in the newly-arranged hive. If it fell short of 25 pounds, I fed sugar syrup until they had from 25 to 30 pounds. This done, I put on Hill's device, or something similar: I left a large-sized passage-way out. I winter them on the summer stands, standing a board leaning against the hive in front of the entrance, to break the force of the wind, and to prevent the sun shining into the entrance.

Now for the result: Every colony came through with an abundance of bees, and plenty of honey, with combs as dry and nice as they were last Fall. One proved to be queenless, which I

united with another colony; so that now I have 24 strong colonies of bees.

Drones made their appearance about a week ago.

In the Fall of 1890, I prepared my bees in the same way, and wintered them without loss. Last year my bees commenced swarming May 20.

Having been thus successful in wintering, by giving upward ventilation through a thick, porous cushion, I shall be very slow in changing to "sealed covers." The only moisture I found in opening the hives this Spring, was a little in the upper part of the cushion, all the rest being dry and warm. By removing the cover one sunny day, all this moisture disappeared.

Is not this a pretty good Winter record for one located on the bleak hills of New Hampshire, in latitude 43° north?

Sunapee, N. H., May 12, 1892.

Honey-Bees as House-Keepers.

WM. ANDERSON.

I have been interested of late in observing the domestic instinct of bees in the matter of cleanliness. On first opening the hives after they have been put out of the cellar in the Spring, one is apt to gain the impression that bees are less particular in the matter of cleanliness than that of industry.

Especially will this be the case if the colony has not come through the Winter in perfect health. Both the appearance and order of the hive will be anything but attractive, and an amateur will naturally conclude that the "busy bee" is a "dirty bee." That such is an aspersion, may be proven by any one who will take the trouble to examine carefully the healthy colony later in the season. As unreasonable would it be to charge your wife with slovenly or uncleanly habits, because the carpets and furniture in the parlors looked musty and dusty a week before the time of Spring house-cleaning!

The fact is, that the instinct of the bee is as keen on the matter of cleanliness, as that of the average human house-keeper—perhaps rather more so.

During the long Winter months the bees have had no chance to remove the accumulations of fetid matter beyond the immediate confines of the brood-nest.

If, through neglect or ignorance on the part of the bee-keeper, a colony has not been provided with the conditions necessary to health—as plenty of good

sealed honey, dry, warm, equable temperature, etc.—disease or starvation to a greater or less extent will be induced. Great suffering and mortality will occur in the colony during the period of confinement, and often—as has happened in this part of Michigan the past Winter—only a handful of poor, sickly things survive. If they can weather the months of April and May, they will probably build up to be an average colony by Fall, but will afford no surplus honey, and are a source of no profit to the owner.

If bee-keepers could only realize the amount of unnecessary suffering they often occasion their little toilers, on account of their neglect of the fundamental principles of wintering, instead of turning up their noses, and exclaiming, "You dirty, ugly things," as they lift the cover on putting them out of the cellar, they would feel thoroughly ashamed of themselves, because they had been so stupidly mean in neglecting their best friends.

To be assured of the cleanly instincts of the honey-bee, we need but watch with what eagerness and energy they prosecute the work of house-cleaning as soon as circumstances and the weather permit them. Wives and housemaids with duster and broom, never created such stir and confusion as these little house-cleaners display in their ambition to make things sweet and neat in the home.

On they come, pell-mell! jostling and intercepting, and overturning one another a thousand times, and all with the good humor and grace of girls at play. One has assumed the duty of undertaker, and without ceremonial display, or affected grief, is bearing a departed sister to the brood-cemetery of the outer world. Another is tussling with a refractory straw-end which had penetrated the quilt, and been an eyesore for months; while a third is loaded with a lump of propolis from the inner floor board.

It is refreshing to see such zest put into what most house-keepers regard as an irksome task. If Solomon had been as familiar with the habits of the honey-bee as those of the ant, he would doubtless have made the former rather than the latter his model for general imitation.

The cleanly instinct of the bee is seen in all departments of its work, both inside and outside the hive. One thing has especially interested me, viz: the care displayed in preparing the cells into which the queen is to deposit her eggs. No painter or decorator ever did his

work of renovation with half such ingenuity and perseverance. Not only is all the loose *debris* removed, even to almost microscopic completeness, but the cell is scraped and excavated throughout, and afterwards polished (not varnished!) until it shines like a mirror. Nature supplies this instinct, which, in a crowded condition of life, such as a colony of bees, is even more imperative than cleanliness, and attention to hygiene among the human species.

The same attention to the law of cleanliness is shown in the manner in which the nectar is deposited and sealed in the comb. What is more cleanly, beautiful, and appetizing sight than a comb of white clover honey newly sealed and properly secured?

Soiled comb-honey is largely due to carelessness on the part of the producer. With the knowledge we now possess, and the appliances at hand for securing a pure article, there is no reason why the rate of consumption of pure honey should not increase 100 per cent. during the next five years. If bee-keepers do their duty, it will.

Imlay City, Mich.

The Qualities of the Black Bees.

A. D. ELLINGWOOD.

Having had my say about the black bees, I had intended to keep quiet, but I feel called upon to clear up one or two points. The following questions have been asked in the AMERICAN BEE JOURNAL:

"Is Mr. Ellingwood sincere in his defense of the black bee, or is he doing it to be odd?" "Has he ever kept Italian bees?"

I think no one who knew my actual experience with black bees would doubt my sincerity in defending them. I firmly believe every word I have said about them.

In answer to the second question, I would say that I have had Italian bees every year but one that I have had the blacks. I have had 40 colonies of Italians at one time, and have bought Italian queens of well-known queen-breeders. I do not say that these queens were worthless; many of them have been valuable, but none have excelled my black queens.

I do not condemn Italian bees—far from it. I consider them an exceedingly valuable race of bees; but I do say, and

can fully substantiate my claim, that *with me* the black bees have been more profitable than the Italians.

As I glance over the numerous articles in the various bee-papers upon this subject, I am greatly amused. One writer says this: "I will concede that the black bees cap their honey whiter;" another says they swarm less; another, that they sting less; another will reluctantly admit that they are superior in this, another in that; and when I come to sum the matter all up, I find that all of the valuable qualities have been conceded to the black bees.

Now, my claims for them are just these: They winter better in New Hampshire, cap their honey whiter, swarm less; they will work on any flower, clover, or anything else, that any other race of bees will work on.

I care not what motive may be ascribed to my defense of my favorite bees, I believe in time to come they will be regarded in a very different light than they now are.

I would like to see Mr. A. E. Manum or some other well known breeder, give them the same careful attention that they give their Italians, and note the result. Before condemning them further, why not breed them for their good qualities, and see what can be done with them?

Groveton, N. H.

Laying Workers, Contraction, Etc.

JAMES HEDDON.

I remember that the editor once suggested that some of the Queries in the AMERICAN BEE JOURNAL were excellent topics for articles, especially such as could not be fairly treated in the short space allotted in the Query Department, and in cases where misapprehension occurs.

What a tanglement and misunderstanding we get into concerning workers becoming fertilized (page 411), all because of the improper use of words. Some of the respondents said that workers were incapable of being fertilized; then what have we meant all these years past by the term "fertile worker?" What does "fertile" mean?

Productive soil is fertile soil; it means productive and not impregnated. Worker-bees do at certain times become fertile, what fertilizes them I do not know, but they change from workers to

egg-layers, and are probably fertilized by a change of food.

Some of us, however, used the word "fertilized" in two different meanings in the same sentence.

Prof. Cook, a very good authority on this subject, seems to come nearer comprehending the querist's meaning than did the rest of us, yet he was puzzled, all from our habit of the improper use of words.

When we who responded came to see all the answers, we all very quickly comprehended the source from which the obscurity arose. In the future let us all be careful to use words properly.*

CONTRACTING THE BROOD-CHAMBER.

Query 814 is about contracting the brood-chamber. Each one of us told what we thought about results, and I think it would be a good plan for some of us to give the reasons why.

One writer uttered a great and important truth when he said that low grades of honey were among the worst of sweets, and that placing them upon the market had done more to degrade our product and cause the cry of "adulteration" than all the adulterating that had been done. You would be led to believe, by some writers, that granulated sugar was so bad and pernicious a sweet, as compared with honey; that every consumer could instantly detect the least particle of it in honey, when the facts are that State and United States chemists have made a gloomy fizzle with their chemicals in attempting to detect adulteration in honey.

The Washington fellows—the learned gentlemen who have graduated from some laboratory sufficient to tap the people for nice, fat salaries—pronounce Chas. F. Muth's bottled honey adulterated. What bee-keeper believes that? Not one. We all know Mr. Muth, and by his works we know him better than the chemicals of any chemist can tell us. When the actions of chemicals fail to tell the learned gentlemen whether the honey they are analyzing is pure or not (which is most of the time), they have a method of guessing at it, and for the guessing business they are assisted by the label. When they read on Mr. Muth's jars of pure honey, the word "Cincinnati," they cried "Adulterated! the town is too big for pure honey, you see!" But the facts still remain—the American people care nothing for the chemists, feeling wholly competent to take care of, and judge for, themselves. When they buy something which tastes

pleasant, and sets gracefully upon their stomachs, they want more, no matter what you call it.

Honey is not sugar syrup; it is not as sweet. Most honey in this respect is more like glucose, but it has the aroma of flowers; it has a honey flavor received from the flowers; it contains an acid secreted by the body of the bee, besides another which the nectar contained while in the flowers.

Some honey is all grape-sugar, while other kinds are part grape and part cane. Some varieties have too much flavor from the flowers, and some not enough. Perhaps some might be improved if the bees were fed granulated sugar syrup while filling the sections, but it does not pay. People are willing to pay a confectioner for candy from three to six times the price of the sugar he used in making it, but very erroneously suppose the bee-keeper and his bees can work it over into honey for nothing. When sugar is worth more than honey, they suppose the same thing.

The facts are that sugar never was, is not now, and likely never will be so cheap that the bee-keeper can devote his capital, time and bees to it at as great a profit as to devote all three to the gathering of honey from the blossoms.

If some of the time spent in talking and thinking about adulteration was spent in studying how to produce rich, ripe honey, and keep it so, we would not not hear so much about impurity and adulteration of our product, coming from consumers.

The present cheap sugar can be very profitably employed in wintering bees; and this brings me to a few thoughts on the system of contraction, first discovered and practically used by Messrs. Oatman Brothers, and published by myself after having experimented with and profitably used it several seasons.

In consideration of the fact that rightly-prepared sugar syrup is much safer than honey as a Winter food for bees, at its present low price, together with the advantages gained in the quantity of surplus honey realized by such use, it pays well to practice the contracting system.

Some writers do not perceive that we gain anything by the above practice in surplus honey, except what we lose in the brood-chamber. Those who oppose contraction have so asserted, but they have proved nothing. You cannot forever go down-hill, but there will come times when you must go up. You can-

not practice contraction at one time of the year without practicing expansion at another.

Now, what does this mean? Not alone that you force the best honey out of the brood-chamber and into the surplus sections, but that you breed bees to become producers instead of consumers. At a certain time of the year you need a large brood-chamber; at another, a small one, in order to economically breed bees for a purpose. The successful practice of contraction must be governed entirely by the honey-flow; it will vary some in different seasons, and very much more in different localities. Each bee-keeper should understand its laws and principles, when he will need no one to direct his practice.

In very many localities where the dreaded Winter disease, known as "bee-diarrhea," annually destroys portions of, or whole apiaries, the feeding of sugar syrup, even at the expense, trouble and risk (risk of robbing) will now at the low price of sugar, make it profitable even to extract honey to make room for the syrup. But how much nicer to have the brood-chambers all ready for the syrup, and the honey it replaces all ready for market, without such labor, trouble and risk; and that is just what contraction accomplishes, in addition to its other uses.

Dowagiac, Mich.

[*If the term laying-worker is used, no one can misunderstand it. To call it a "fertile worker" is misleading.—Ed.]

Judging Bees at Fairs.

W. C. FRAZIER.

At present there is some discussion in the bee-world concerning the judging of bees at Fairs. As I have had something to do for some years with the management of Fairs, both local and State, I will contribute my mite.

Stock of almost all kinds has a standard by which it is judged; in this respect the bees are behind other stock—they have no standard.

While the scale of points as adopted by the North American Bee-Keepers' Association might do for the breeder in his yards, and after having wintered a queen and used her through one honey season, he might be able to form a pretty correct opinion of how near she would come to filling the bill (though not one in ten could apply it correctly).

Yet this scale is entirely "too slow," and for the judging of a nuclei of bees on exhibition, that you have for the first time seen, it is useless.

To offer a scale of points that would be practical, would be to call down on the offerer's head a fire from all along the line.

Bees at the time these exhibits usually occur (the last week of August to the middle of October), have but very little brood; but if exhibited, they should be put in the best possible condition, and, if possible, have some brood in all stages, drones, etc.

The amount of hair on a worker-bee is an indication of its hardiness and honey-gathering qualities. Who knows how much of an indication this is?

The breeders generally are no more anxious to have a scale of points for bees than they are to have a system of grading honey; because, if there was, they would have to breed to it or quit. The way it is now, is like the man who was on the jury. He said: "It was no trouble at all for him to arrive at a verdict; but the others were the eleven stubbornest men he ever saw!"

There should be no competition between the three-banded and the five-banded Italians. Any association in any State, could have the State Fair premium list changed so as to admit the five-banded bees, in a separate class by themselves.

Present it in a proper manner, and at the right time, and without a doubt the request would be granted. But this must be done before the Board of Directors meet, which is usually in January. So it is too late for this year now, and as there will not be any State Fair in many of the States next season, it is too late for two years. (Illinois, Missouri, Iowa, Kansas, Nebraska, Minnesota, etc., will have no State Fairs in 1893.)

My own private opinion is, the time is far distant when a scale of points will be adopted for the Italian bee. Look at the advertising columns of any bee-periodical, and see what the breeders say of their own bees. One has "leather-colored bee;" the next has "five-banded golden;" another has a strain of "non-swarmer;" while his next neighbor has a strain of "red clover" bees. The next determined not to be beaten, has "a strain made up of all the good qualities of all the other strains." If the five-banded golden bees were 50 per cent. the best bees on earth, a few years of such work as has been done with them in the past would kill them out.

I know men who have purchased half a dozen of the untested queens at a time, and not one queen showed bees with more than three bands. I never received, or heard of any one who did receive, an untested queen of *some* of the breeders of "five-banded goldens," that did show five-banded bees.

I could not find a breeder who would guarantee to send me a breeding queen which he would guarantee to show all five-banded bees, for less than \$5.00 or \$6.00; while I can buy untested queens of five-banded stock in any quantity for from 60 to 75 cents. Now, I do not wish to convey the impression that all who advertise five-banded bees, have poor stock—far from it; but a person investing in them for the first time, is nearly sure to purchase of one of those whose bees (we will put it mild) do not test out well.

Suppose you would purchase six untested queens of five-banded stock; you would expect to get some five-banded bees. Now, if these would all test out to give three-banded bees, and nothing more, what would you think? Would you not be a little cautious where you invested again?

BLACK VS. ITALIAN BEES.

The discussion of blacks against Italians still goes on—perhaps always will. If a man wishes bees to shift for themselves, he cannot do better than to have blacks, or do a worse thing than to get Italians.

The Italians, like all other breeds of fine stock, require extra care. That is wherein their excellence lies.

The Shorthorn or Hereford cattle, turned loose upon the plains of Texas, would be a very poor investment; but stall-feed them, and the Texas steer is nowhere in comparison. Just so with the Italian bee. It is capable of management and manipulation, which could never be accomplished with the black bees.

Atlantic, Iowa.

A Very Backward Spring.

BENJ. E. RICE.

The Winter of 1891 and Spring of 1892 is now and has been one of the most destructive to bees that was ever known in Southwestern Wisconsin, by its oldest bee-keepers (possibly with the exception of the year so many were lost by disease). It has been now almost 10

months since the bees have had a chance to gather anything but pollen, and only now and then a day suitable even to get that. The most of the bees that were housed or kept in-doors during the Winter, were put out on the summer stands in March, and the bee-keeper has been continually looking, from that time up to the present time, for days that were suitable to work with bees, and give them the help they so much need.

The last two months have been exceedingly hard on them. It has been wet and cold five days out of six, and rained the most of the time for the last three or four weeks, and it is still at it, and if it continues much longer there will not be enough bees left for seed. Up to this time we have had the maple bloom, the elm, the willow, and some of the earliest Spring flowers, and put them all together, they have not benefited the bees one particle, for it was almost certain death to venture outside of their hives.

I have spent some time, of late, to find out as near as possible the number of colonies of bees lost, by those that I am well acquainted with, and who live near me, but as people do not care about every one knowing their ups and downs in life, I will omit the names and quote by numbers from one to twenty, and I think that will be a fair representation throughout this section of Wisconsin. These numbers, I think, will be less than the actual loss at this present time (May 17) considering the weather, as it is still raining and blowing, and the prospect looks very discouraging indeed.

The following will be the losses from twenty bee-keepers :

No. 1.—	50 per cent.
No. 2.—	45 "
No. 3.—	25 "
No. 4.—	80 "
No. 5.—	50 "
No. 6.—	50 "
No. 7.—	75 "
No. 8.—	70 "
No. 9.—	90 "
No. 10.—	75 "
No. 11.—	100 "
No. 12.—	50 "
No. 13.—	30 "
No. 14.—	40 "
No. 15.—	25 "
No. 16.—	100 "
No. 17.—	50 "
No. 18.—	40 "
No. 19.—	50 "
No. 20.—	90 "

The chances for bee-pasturage is good, providing we have favorable weather

from now on, for the fruit-bloom buds are about ready to open, and there is a good chance for white clover to follow up in its turn.

Boscobel, Wis., May 17, 1892.

Bumble-Bees as Wax-Producers.

GEO. E. FELLOWS.

I send the following from the *Grange Home*, thinking that it might be interesting reading to those who take the AMERICAN BEE JOURNAL:

IMPORTING BUMBLE-BEES FROM INDIA TO PRODUCE WAX.

The Department of Agriculture is about to send an expedition to India for the purpose of procuring certain giant bees which are wild in that country. They are the biggest species known in the world, and they build combs in the forests as large as ordinary house doors, giving enormous quantities of wax. If they could spread themselves in the semi-tropical forests of the United States, they might be made to supply considerable crops of the finest and most valuable wax.

Curiously enough, the drones are no larger than ordinary bees, and this fact affords reason for hoping that they will mate with the females of colonies acclimated here. These wonderful insects have longer tongues than are possessed by other bees, and the belief is entertained that they could secure from many kinds of flowers honey which now goes to waste.

Bumble-bees are generally supposed to be of no particular use in the world. They are active and industrious honey gatherers, but there are never enough of them in one colony to make a store that is worth taking. When Winter comes the queen-bee seeks a place for hiding during the cold months, beneath moss, or in a heap of leaves. The warm sun of approaching Summer awakens her, and she crawls out. Immediately she looks about for a nest to breed in. She then begins collecting pollen for the nest, fetching load after load until she has formed a ball, perhaps as much as an inch in diameter. In the ball of pollen she lays her eggs, and after a few days they are hatched, bringing forth little worm-like larvæ.

The larvæ feed upon the nutritious material, consuming the portions nearest at hand, until each one has cleared a little room. Then it proceeds to spin a

cocoon around itself, and after a little while it comes out of this chrysalis a full-fledged worker-bee. Almost immediately these new fledged bees begin gathering pollen, which they add to the original lump, while the queen goes on laying eggs in it as long as warm weather lasts.

Perhaps before Winter arrives the mass will have grown to the size of one's two fists. It is literally honey-combed with cells from which the young bees have made their escape, and these empty chambers are used for the storing of honey. Most of the honey gathered by bumble-bees is obtained from red clover.

Up to nearly the end of the Summer the queen lays eggs which produce only females which are undeveloped sexually. They are the honey-gathering and comb-building class. When Autumn is coming on, however, she produces males, called drones. At the same period also she lays eggs which give birth to fully developed females, all of which are destined to be queens the following year. From six to twelve of the future queens are turned out by each hive. When cold weather arrives they crawl into snug places where they hibernate during the Winter, gathering pollen in the Spring, and laying their eggs in it. Only the queens survive, all the workers and drones dying.

Thus it may be said that every bumble bee hive is wiped out each Autumn. They do not gather in numbers sufficient to accumulate large stores of honey, notwithstanding their industry. Ordinarily, a single colony will not number more than 30 or 40 individuals. Their cells are huddled together without order, so that the honey cannot well be obtained from the combs in a clear state.—*Grange Home.*

The Wintering of Bees.

It is plainly to be seen that wintering bees does not entirely depend upon the weather. The season preceding has much to do with the success of wintering, and the prospects of the future crop. The past Winter has been mild, and yet bees have not wintered well. The cause of this impropitious result cannot be attributed to the severity of the Winter, but will have to be charged to the unfavorable conditions of last Fall, and the latter part of Summer.—*Exchange.*

CONVENTION DIRECTORY.

Time and place of meeting.

1892.
May 28.—Haldimand, at Nelles' Corners, Ont.
E. C. Campbell, Sec. Cayuga, Ont.
Sept. 7, 8.—Nebraska, at Lincoln, Nebr.
L. D. Stilson, Sec., York, Nebr.
Oct. 7.—Utah, at Salt Lake City, Utah.
John C. Swaner, Sec., Salt Lake City, Utah.
1893.
Jan. 13, 14.—S.W. Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Eugene Secor, Forest City, Iowa.
SECRETARY—W. Z. Hutchinson, Flint, Mich.

National Bee-Keepers' Union.

PRESIDENT—James Heddon, Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Good Prospect for Honey.

Bees have wintered only fairly in this vicinity. There was some loss in wintering, and a greater loss from Spring dwindling. The season up to this time has been very unfavorable on account of the continued wet weather; if not raining it is cloudy and damp, which is not good for the bees. The prospect for a honey crop was never better. Fruit trees are unusually full of bloom. White clover is making an excellent start, and the ground is thoroughly wet, so we expect a free blooming of all honey-plants. The honey that we got last year was very poor. B. A. MANLEY.

Milo, Iowa, May 17, 1892.

Early Experience in Bee-Keeping.

In 1858 I bought my first Langstroth bee-hive, paying \$5.00 for the hive, and \$5.00 for the right to use of the same. The hive was a two-story one, and the upper story was made of part glass and part wood; in other words, a double-glass super. The queen very rarely went above, and the bees stored from

200 to 300 pounds of surplus honey every good honey year. When the super was filled with honey, we would take it off, and drive the bees out with smoke, then take out the frames and cut out two-thirds of the honey, leaving the balance for the bees to start on again. They would quickly fill up again with nice white honey, to be robbed again in the same manner. It was a very smeary process for the bees, but we obtained lots of honey in that way. My first experience with bees was in 1842. I was a boy 12 years old. Early in the Summer of that year, a swarm of bees came to my father's, and settled on a fence-stake. I hived them in a hollow-log, open at both ends. I laid a loose board on top, and when the bees filled the hive, I took the honey out at the top.

C. L. BROWN.

Louella, Mo., May 7, 1892.

Unfavorable Spring Weather.

We have had very bad weather here this Spring for bees. There was hardly a day in April that the bees could fly, and May, so far, has been cold and wet. There have been a good many colonies that have died, and some bee-keepers have lost all.

NIGH BROS.

New Cassel, Wis., May 16, 1892.

Drone Foundation for Sections.

Would it be any better to have the foundation for sections of drone-cell size? Please answer through the BEE JOURNAL.

A. P. R.

Volo, Ills.

[At first the foundation for sections was made with the base of drone-cells, but the supposed advantages were more than counterbalanced by the disadvantages.—Ed.]

Bees Breeding Slowly.

Although Spring opened very early, and we had a few bright days early in April, since then we have had nothing but cold, rainy or windy weather, consequently bees are breeding up very slowly. I think, on an average, I have just about as many bees as I had a month ago. Pollen is coming in, and I am feeding a little inside the hives early in the morning.

C. A. MONTAGUE.

Archie, Mich., May 17, 1892.

Queen Mated with a Black Drone.

Will you please answer the following question: An Italian queen mates with a black drone, and her worker-bees will be hybrids, of course. Will her drones be pure Italians, or hybrids?

JOSHUA TAYLOR.

Richmond, Kan., May 11, 1892.

[If the queen is a pure Italian, her drones will also be pure Italians—no matter what mating she may have. If the drone she mates with is a hybrid or black bee, her worker progeny will be hybrids.—Ed.]

Another Section Press.

I send herewith a pencil sketch of a "section press" of my own invention, which I am using now. I find it far superior to anything I have seen or heard of. It does its work quickly, easily and well. With it I can put a thousand sections together in 40 minutes, if necessary. With 50 cents worth of material, any handy man can make one in two hours. There is no patent on it, and I give it to the bee-keepers of the United States, hoping they will give it a fair trial, and save money by it.

H. C. BABCOCK.

Lemoore, Calif., May 6, 1892.

[It is a bench about 4 feet long. The operator strides it like he would a horse, and while operating the treadle by foot, his hands are free to manipulate the sections. The idea is a good one, but its construction is much like several others which have preceded it.—Ed.]

Wavelets of News.

Timely Hints.

About this time, if bees are gathering nothing, their stores will disappear as if by magic. It is because they are using up so much to feed the young brood.

Very few bee-keepers ever get any surplus from fruit bloom. And yet fruit bloom is supposed to yield much honey. But it is all used up in rearing brood.

I gave each colony, as soon as I could, after being put out of the cellar, about 10 pounds of syrup.

The syrup was made thinner than would do for Fall feeding, 4 pounds of

sugar to one quart of water. (Five pounds of sugar to one quart of water Fall feeding.) To prevent the granulation, I put an even tea-spoonful of tartaric acid to 20 pounds of sugar. It is important that bees now become strong in numbers.—DR. C. C. MILLER, in the *Stockman and Farmer*.

Rosy Prospect for the Season.

The outlook for the season has a rosy tinge, and with the copious showers of recent date, indicates a good growth of the sages for the year. Southern California has need of a good honey yield, as the last season did not pan out well, and the year before was not rated as an average.—C. N. WILSON, in the *Rural Californian*.

Bees and Fruit Growing.

It is simply an aggravated case of base ingratitude on the part of the fruit-grower, if he finds fault with his bee-keeping neighbor on account of the injury done to fruit by bees. The fruit-grower, in fact, has no warmer friend, no more useful agent, than the pollen-carrying, honey-seeking little insect. The interests of the fruit-grower and bee-keeper, far from being antagonistic, lie indeed so nearly in the same direction that we urgently advocate the combine of the two vocations in the same person.

The leading cause of barrenness in fruit trees and brush fruits is lack of proper pollination, due again, in many cases, to the absence of the right kind of pollen, and in others to its non-transfer from the stamens to the needy pistils. Many trees are not self-fertilizing, either because their own pollen upon their own pistils has no potency, or because the pollen is not discharged at the time when the pistils are receptive.

We believe bees are a good thing, and a number of colonies should be kept in or near every orchard.—*Popular Gardening*.

President Harrison has accepted the invitation, conveyed to him by a committee, to attend the dedication ceremonies of the World's Fair buildings next October. Every member of the President's Cabinet, and of the Supreme Court, and nearly every senator, congressman and governor, also, will be present on that occasion.



ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than \$1.00.

A line of this type will admit about eight words.
ONE INCH will contain TWELVE lines.

Editorial Notices, 50 cents per line.
Special Notices, 30 cents per line.

Transient Advertisements must be paid for IN ADVANCE.

DISCOUNTS:

On 10 lines, or more, 4 times, 10%; 8 times, 15%; 13 times, 20%; 26 times, 30%; 52 times, 40%.
On 20 lines, or more, 4 times, 15%; 8 times, 20%; 13 times, 25%; 26 times, 40%; 52 times, 50%.
On 30 lines, or more, 4 times, 20%; 8 times, 25%; 13 times, 30%; 26 times, 50%; 52 times, 60%.
On larger Advertisements, discounts will be stated, upon application.

Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

Send us one new subscription, with \$1.00, and we will present you with a nice Pocket Dictionary.

The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	\$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the *American Bee Journal* must be sent with each order for another paper or book:

	Price of both.	Club.
The <i>American Bee Journal</i>	\$1 00....	
and Gleanings in Bee-Culture.....	2 00....	1 75
Bee-Keepers' Guide.....	1 50....	1 40
Bee-Keepers' Review.....	2 00....	1 75
The Apiculturist.....	1 75....	1 65
Canadian Bee Journal.....	2 00....	1 75
American Bee-Keeper.....	1 50....	1 40
The 7 above-named papers.....	5 75....	5 00
and Langstroth Revised (Dadant).....	2 40....	2 25
Cook's Manual (1887 edition).....	2 25....	2 00
Quincy's New Bee-Keeping.....	2 50....	2 25
Doolittle on Queen-Rearing.....	2 00....	1 75
Bees and Honey (Newman).....	2 00....	1 75
Binder for Am. Bee Journal.....	1 50....	1 40
Dzierzon's Bee-Book (cloth).....	3 00....	2 00
Root's A B C of Bee-Culture.....	2 25....	2 10
Farmer's Account Book.....	4 00....	2 20
Western World Guide.....	1 50....	1 30
Heddon's book, "Success,".....	1 50....	1 40
A Year Among the Bees.....	1 50....	1 35
Convention Hand-Book.....	1 50....	1 30
Weekly Inter-Ocean.....	2 00....	1 75
Toronto Globe (weekly).....	2 00....	1 70
History of National Society.....	1 50....	1 25
American Poultry Journal.....	2 25....	1 50
The Lever (Temperance).....	2 00....	1 75
Orange Judd Farmer.....	2 00....	1 75
Farm, Field and Stockman.....	2 00....	1 75
Prairie Farmer.....	2 00....	1 75
Illustrated Home Journal.....	1 50....	1 35
American Garden.....	2 50....	2 00
Rural New Yorker.....	3 00....	2 25
Nebraska Bee-Keeper.....	1 50....	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Winter Problem in bee-keeping; by G. R. Pierce, of Iowa, who has had 25 years' experience in bee-keeping, and for the past 5 years has devoted all his time and energies to the pursuit. Price, 50 cents. For sale at this office.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with \$1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents**.

The Honey-Bee; Its Natural History, Anatomy and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, 72 figures, and 136 illustrations. \$1.00. For sale at this office.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for \$1.25; or for 200 colonies for \$1.50. *Order one now.*

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

We Club the *American Bee Journal* and the *Illustrated Home Journal*, one year for \$1.35. Both of these and *Gleanings in Bee Culture*, for one year for \$2.15.

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the *Convention Hand-Book* by mail, postpaid. It sells at 50 cents.

HONEY AND BEESWAX MARKET.

CHICAGO, May 21.—Fancy comb honey is selling at 16c.; choice, 14@15c. Other grades 10@13c. Extracted, scarce, good demand, at 7@7½c. Beeswax, active sale, 28c.

S. T. FISH & CO., 189 S. Water St.

NEW YORK, May 21.—No demand for comb honey excepting fancy white. Quite a stock on the market of off grades and buckwheat: New Southern extracted arriving and sells at from 70@75c. per gallon for choice; 65@70c. for common. Beeswax quiet but firm at 27@29

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Mo., May 21.—Demand light, supply large. Prices: No. 1 white comb, 13@14c.; No. 2 white, 10@12c. Extracted, white, 6@7c.; amber, 6@6½c.; dark, 5c. Beeswax—Demand good, supply light. Price, 22@27c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, May 21.—Demand is slow for comb with good supply. Price, 12@15c. Demand for extracted is fair at 5@8c.

Beeswax is in good demand, at 25@27c for good to choice yellow.

C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, May 21.—Demand for honey is very moderate, supply good, exceeding the demand. There is little demand for fancy 1-lbs. Market pretty well cleaned up of that grade, but plenty of fair. Prices: Comb, clover, 8@12c.; buckwheat, 7@9c. Extracted, clover, 6½@7c.; buckwheat, 5½@6c. Beeswax—Demand fair, supply plenty for demand, at 27@29

CHAS. ISRAEL & BROS., 110 Hudson St.

KANSAS CITY, Mo., May 21.—Demand poor, supply light of comb. Fancy 1-lbs., 12@13c.; dark, 8@9c. Extracted, white, 7c.; dark, 5@6 No beeswax on the market.

HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, May 21.—The demand is slow, and supply fair, and will be absorbed by time new crop comes. Comb, 11@12½c. Extracted, 7@8c. Beeswax—Demand moderate, supply fair; price, 27@28c.

M. H. HUNT, Bell Branch, Mich.

CHICAGO, May 21.—Demand fair and supply short on fancy stock. Comb, 14@15c. Extracted, slow sale at 6@7c. Beeswax—Demand good, supply short on prime yellow; price, 25@28c.

J. A. LAMON, 44-46 S. Water St.

MILWAUKEE, May 21.—Demand very moderate, supply average of all grades but common quality. Best 1-lbs. 15@16c; common, 12@13c. Extracted, white, in barrels, 7c.; in kegs, 7½c; in pails, 7½@8c. Beeswax—demand fair, supply small. Price, 23@28c.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, May 21.—Demand light, supply light. Comb, 10@12c. Extracted, 5@6½c. Beeswax—Demand fair, supply light. Price, 25@27c. A fair to good honey crop for 1892 is expected.

SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

NEW YORK, May 21.—Demand is light, and supply large, except buckwheat comb. We quote: Fancy white comb, 12@14c; buckwheat, 9@11c. Extracted—Clover and basswood in good demand at 6½@7c; buckwheat in demand at 5@6c. Beeswax in fair demand at 26@28c.

F. I. SAGE & SON, 183 Reade St.

CHICAGO, May 21.—Demand is slow, supply fair, but not excessive, and market should clean up. Prices: Comb, 15c. is about the top. Extracted, 6, 7@8c.; supply small. Beeswax—Demand good, supply better than last season. Price, 27c. for yellow.

R. A. BURNETT, 161 S. Water St.

BOSTON, May 21.—Demand is light, supply fair. We quote: 1-b. fancy white comb, 13@15c; extracted, 6@7c. Beeswax—Demand fair, supply light. Price, 28c.

BLAKE & RIPLEY, 57 Chatham St.

MINNEAPOLIS, MINN., May 21.—Demand is moderate, supply of dark is large, but white is not so plentiful. Prices: Dark comb, 10@13c.; white, 15@17c. Extracted, supply plenty. Beeswax—Demand good, supply small.

STEWART & ELLIOTT.

ALBANY, N. Y., May 21.—Demand is very little for comb at 8@12c. Market quiet. Extracted, 6@7c. Beeswax in good demand at 28@30c. for good stock.

H. R. WRIGHT, 326-328 Broadway.

NEW YORK, May 21.—Demand moderate, and supply reduced, with no more glassed 1-lb. nor paper cartons, 1-lb. We quote: Comb, 1-b., 14@15c. Extracted—Basswood, 7½@7¾c; buckwheat, 5½@6½c; Mangrove, 68@75c per gal. Good demand for dark extracted honey. Beeswax, in fair supply, with small demand, at 26@27c.

F. G. STROHMEYER & CO., 120 Pearl St.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with \$1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

Prompt Shipment.

I have received the sections and foundation all right. Thanks for your promptness. The freight on the sections was only 75 cents.

Riverton, Ills.

C. V. MANN.

Busy Bees, and How to Manage Them, by W. S. Pouder. Price 10 cents. For sale at this office.

Subscribers who do not receive their papers promptly, should notify us at once.

Our Sewing Machine.

I have received your premium sewing machine, and am well pleased with it. My wife says that it does as good work as a machine that would cost \$35 or \$40 here. I would advise any one wanting a sewing machine to get one, because it is as good as any.

Lisbon, Tex.

J. D. GIVENS.

Prompt and Reliable.

I received the goods in good order five days after they were ordered of Thomas G. Newman & Son. Many thanks for such prompt shipment. They will receive my future patronage.

E. W. EMERSON.

Clear Lake, Wis., May 10, 1892.

Get a Binder, and always have your BEE JOURNALS ready for reference. We will mail you one for 50 cents.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

FOR SALE OR EXCHANGE—Italian Bees and Queens. Address, OTTO KLEINOW, 22Etf No. 150 Military Ave., Detroit, Mich.

WANTED—The reader of this to send One Dollar for my new Smoker—the "Boss." The best, handsomest and most durable Smoker made. W. C. R. KEMP, Orleans, Ind. 18A5t

FOR SALE—Thoroughbred Light Brahma and Black Minorcan Fowls. Eggs \$1.25 per 13. Circular free. ALBERT LIND, 20A3t Calumet Harbor, Wis.

WANTED—Five Hundred Apalists to try my PURE ITALIAN QUEENS at one dollar each. Now ready. Satisfaction guaranteed. H. M. STEPHENS, 21A4t Munden, Republic Co., Kan.

BEE-KEEPERS, combine Pure-Bred Poultry in connection with Bees—you will have something sure then, in a poor year for honey. I will send 15 Pure B. P. Rock Eggs for \$1.00; 26 for \$1.50. First Premium at Barry County Fair, 1891, on Breeding Pen. Address, MRS. PARKER ERWAY, 20A3t Hastings, Mich.

WE SEND QUEENS

BY Return Mail to Anyone, Anywhere. B at Anytime in U. S. or Canada. **Italian**, Untested, \$1; 3, \$2.75; 6, \$5; 12, \$9. Tested, \$2; 3, \$5. Two-frame Nucleus, with about 1 lb. of Bees, with any Queen, \$1.25 extra. Safe arrival guaranteed. Send for our Circular of **Dovetailed Hives**, Smokers, Foundation, **Drones**, etc. Colwick & Colwick, Norse, Tex. 10A1f *Mention the American Bee Journal.*

A Rare Opportunity.

ON account of engaging in other business, I offer for sale **75 Heddon-Langstroth Hives**, 8 frames filled with Combs built on full sheets of Foundation, at \$1.00 each. **100 Supers**, 6 wide-frames, tin separators, at 30c each. Hives and Supers are all painted, well made, and first-class in every respect. The above prices are much less than cost of material in flat. Sold in quantities to suit purchaser. Special discount on whole lot.

M. P. CADY, Birmamwood, Wis.

Bees by the Pound!

FRIENDS, I have 200 Colonies of Italian and Hybrid Bees I will sell you in June and July at \$1.25 per pound; 10 lbs. or more at \$1.15 per lb. Hybrid Queens, 50c.; Italians, \$1.00. Safe arrival guaranteed. Money Order Office, Greenville, Tex.

MRS. JENNIE ATCHLEY,

22A4t FLOYD, Hunt Co., TEXAS.

Golden Carni-Italians—The Largest, Most Beautiful, Gentle & Industrious Bees. Try them and be convinced. Queens, \$1.00 each. Sample Bees, 10c. Send for Circular giving full description. 22Etf J. A. ROE, Union City, Ind.

PUNIC QUEENS

REARED from Imported Mothers. Italians from our famous Hundred Dollar QUEEN. Golden Carniolans from original stock. Queens ready to mail May 25. **HENRY ALLEY**, 14A1f WENHAM, MASS.

DR. J. W. CRENSHAW, Versailles, Ky.,

OFFERS For Sale, Untested Queens through May and June at \$1.00 each; after 75 cts. Imported or Doolittle Mother. Contracts solicited. Also **Celery Plants** July to Sept. at \$2.00 per M. Also any of Root's Goods 21A6t *Mention the American Bee Journal*

PRICE-LIST of BEE-HIVES.

	8-frame.	10-frame.	8-frame.	10-frame.
	1½-story	1½-story	2-story	2-story
In lots of	5 72c	82c	87c	97c
" "	10 69c	79c	84c	94c
" "	25 60c	70c	75c	85c
" "	50 58c	68c	73c	83c
" "	100 57c	67c	70c	80c

The reason we can sell hives so cheap, is that Lumber is cheaper in Minnesota than in any other State in the U. S. The above prices are for Dovetailed, Simplicity and three other styles. Send for Catalogue.

F. C. ERKEL,

19A1f LE SUEUR, MINN.

Mention the American Bee Journal.